REMARKS

Applicant respectfully requests reconsideration and continued examination of this application in view of the amendment and the following remarks. Claims 1-34 are pending in this application.

1. Status of the Claims

The Examiner has indicated that claim 8 contains patentable subject matter. Applicant is grateful for the indication of allowable subject matter.

The dependency of claims 19, 20, 22, 28, 29 and 30 has been amended to provide an antecedent basis for "retention members" and "connection members." Claims 13 and 24 have been amended to replace "retainer" with "retention." Claim 29 has been amended to correct an editorial oversight. Pages 13 and 14 of the present application provide support for the above amendments.

Claim 34 has been added. Support for claim 34 can be found in FIG. 1 and page 9. In particular, sheet 32 can be folded over rotating members 29a and 29b to change the display from a breakfast menu to a lunch menu. Rotating members 29a and 29b are substantially parallel to each other as shown in FIG. 1. Thus, while the breakfast menu is being changed to a lunch menu, sheet 32 is folded over rotating member 29a or 29b and has two substantially parallel portions within the display device on either side of rotating member 29a or 29b.

2. 35 U.S.C. §112 Rejections

Claims 24-28 and 31 were rejected because of a lack of antecedent basis for "retention members" and "connection members" in claims 24, 28 and 31. Applicant submits that the amendments described above provide the necessary antecedent basis. Applicant requests the withdrawal of the § 112 rejections.

3. 35 U.S.C. §§ 102 and 103 Rejections

Claims 1,2, 4-7, 9-17, 19-28 and 30-33 were rejected as being anticipated by U.S. Patent No. 4,693,026 to Callahan et al. ("Callahan"). Claims 3, 18 and 29 were

rejected as being not patentable under 35 U.S.C. §103 over Callahan in view of U.S. Patent No. 5,065,537 to Bailey ("Bailey"). Applicant respectfully traverses these rejections.

Callahan discloses an outdoor advertising sign. The outdoor advertising sign has "[a] pair of white acrylic sheets, indicated at 29." Col. 3, ln. 45. The Examiner contends that the white acrylic sheets 29 of Callahan are non-self-supporting because they are mounted to a frame. The Examiner's contention is incorrect. As disclosed in Wikipedia, acrylic is also called polymethyl methacrylate and is often used as a substitute for glass. *See* Exhibit A. As one of skill in the art would understand from reading the specification of the present application, acrylic sheets are self-supporting. In a manner similar to a glass window pane, an acrylic panel can be attached to a frame when making a display, a window or the like.

Applicant has defined "non-self-supporting" to mean "that the sheet is not self-supporting by itself (typically because it is too flexible or not sufficiently rigid)." Page 10, lns. 5-7. As will be shown, one of skill in art who read the specification would understand a non-self-supporting sheet to mean that the sheet is not capable of supporting its own weight. FIGS. 1 and 3 both show that the non-self-supporting sheet 29 is sufficiently flexible that the corners can be bent back. FIG. 1 and page 9 disclose that sheet 29 is sufficiently flexible to be bent over rotating members 29a and 29b to change the display from a breakfast menu to a lunch menu. Furthermore, sheet 29 may be attached to belt 15 by hook and loop fasteners such as Velcro®. Page 9. Belt 15 is looped around rotating members 29a and 29b. Page 9. Hook and loop fasteners are easily detached. Thus, sheet 29 has to be very flexible and provide little or no resistance to bending as the menu changes from breakfast to lunch and back again. At no point does the application disclose a flexible sheet 32 that is capable of supporting its own weight. Thus, one of skill in the art would understand non-self-supporting to mean not capable of supporting its own weight. Consequently, Callahan does not disclose a non-self-supporting sheet and does not anticipate claims 1, 2, 4-7, 9-17, 19-28 and 30-33.

Bailey does not remedy the deficiencies of Callahan. Bailey discloses a "transparent sheet 48 which is part of the front wall 32 of the readerboard." By

definition, walls are capable of supporting their own weight. Thus, Callahan cannot be combined with Bailey to arrive at Applicant's claimed invention. Furthermore, neither Callahan nor Bailey provide any suggestion or teaching that their relatively rigid sheets can be replaced with non-self-supporting sheets. Consequently, claims 1-33 are novel and patentable over Callahan and Bailey.

Similarly, Callahan and Bailey do not teach, disclose or suggest a transparent sheet which can be folded into two substantially parallel portions within the display device. Consequently, claim 34 is novel and patentable over Callahan and Bailey.

CONCLUSION

In view of the foregoing, all of the rejections have been overcome and claims 1-34 are allowable. An early indication of allowance is solicited.

Respectfully submitted,

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Dated: March 15, 2006

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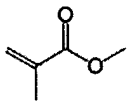
Exhibit A

Wikipedia article on "Polymethyl Methacrylate"

Polymethyl methacrylate

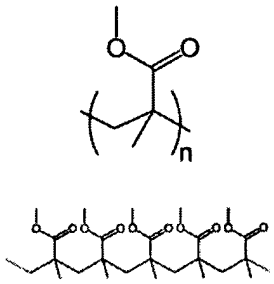
From Wikipedia, the free encyclopedia



Structure of methyl methacrylate

Polymethyl methacrylate (PMMA) or poly(methyl 2-methylpropanoate) is the synthetic polymer of methyl methacrylate. This thermoplastic and transparent plastic is sold by the tradenames **Plexiglas**, **Perspex**, **Acrylite**, **Acrylplast**, and **Lucite** and is commonly called **acrylic glass** or simply **acrylic**. The material was developed in 1928 in various laboratories and was brought to market in 1933 by the German Company Röhm (GmbH & Co. KG).

Polymethyl methacrylate



Chemical name	poly(methyl 2-methylpropenoate)
Chemical formula	$(C_5O_2H_8)_n$
Synonyms	polymethylmethacrylate PMMA poly(methyl methacrylate) methyl methacrylate resin
Molecular mass	xx.xx g/mol
CAS number	9011-14-7
Density	1.19 g/cm^3
Melting point	130-140°C (265-285°F)
Boiling point	xx.x °C
Refractive index	1.492 (λ=589.3 nm)
V-number	55.3
SMILES	C[C](C)C(=O)OC
Disclaimer and references	

Contents

Properties

The material is often used as an alternative to glass. Differences in the properties of the two materials include:

- PMMA is lighter: its density (1190 kg/m^3) is about half that of glass.
- PMMA does not shatter.
- PMMA is softer and more easily scratched than glass. This can be overcome with scratch-resistant coatings.
- PMMA can be easily formed, by heating it to 100 degrees Celsius.
- PMMA transmits more light (92% of visible light) than glass.
- Unlike glass, PMMA does not filter UV (ultraviolet) light. Some manufacturers coat their PMMA with UV films to add this property.
- PMMA allows infrared light of up to 2800 nm wavelength to pass. IR of longer wavelengths, up to 25,000 nm, are essentially blocked. Special formulations of colored PMMA exist to allow specific IR wavelengths to pass while blocking visible light (for remote control or heat sensor applications, for example).

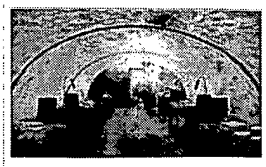
PMMA can be joined using cyanoacrylate cement (so-called "Superglue"), or by using liquid di- or trichloromethane to dissolve the plastic at the joint which then fuses and sets, forming an almost invisible weld. PMMA can also be easily polished to restore cut edges to full transparency.

To produce 1 kg of PMMA, about 2 kg of petroleum is needed. In the presence of air, PMMA ignites at 460° C and burns completely to form only carbon dioxide and water.

If in the structure of PMMA the methyl groups (CH_3) attached to the C atoms are replaced by single hydrogen atoms, we obtain poly(methyl acrylate), a white soft rubbery material. It is softer than PMMA because its long polymer chains are thinner and smoother and can more easily slide past each other.

Uses

PMMA is used for instance in the lenses of automobile running-lights. The spectator protection in ice hockey stadiums is made of PMMA, as are the largest windows and aquariums in the world. The material is used to produce laserdiscs, and sometimes also for DVDs, but the more expensive polycarbonate (also used for CDs) has better properties when exposed to moisture.



Underwater restaurant *Ithaa*, five meters below sealevel, is encased in PMMA

Acrylic paint essentially consists of PMMA suspended in water; however since PMMA is hydrophobic, a substance with both hydrophobic and hydrophilic groups needs to be added to facilitate the suspension.

PMMA has a good degree of compatibilty with human tissue, and can be used for replacement intraocular lenses in the eye when the original lens has been removed in the treatment of cataracts. Hard contact lenses are frequently made of this material; soft contact lenses are often made of a related polymer, in which acrylate monomers are used that contain one or more hydroxyl groups to make them hydrophilic.

In orthopedics, PMMA bone cement is used to affix implants and to remodel lost bone. It is supplied as a powder with liquid methyl methacrylate (MMA); when mixed together these yield a dough-like cement that gradually hardens in the body. Surgeons can judge the curing of the PMMA bone cement by the smell of MMA in the patient's breath. Athough PMMA is biologically compatible, MMA is considered to be an irritant and a possible carcinogen. Dentures are often made of PMMA. In cosmetic surgery, tiny PMMA microspheres suspended in some biological fluid are injected under the skin to reduce wrinkles or scars permanently.

Recently, a blacklight-reactive tattoo ink using PMMA microcapsules has surfaced. The technical name is BIOMETRIX System-1000, and it is marketed under the name "Chameleon Tattoo Ink". This ink is reportedly quite safe for use, and claims to be FDA approved for use on wildlife that may enter the food supply.

See also

- Other transparent plastics: polystyrene, polycarbonate

External link

- Optical & Mechanical Characteristics of Plexiglas (http://www.roehm.de/en/plexiglas/_download/download/plexiglas.Par.0004.TRow.0004.TCell.0001.File.tmp/211-1(PDF file; manufacturer's data, look at the end)

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Categories: Plastics | Organic polymers | Optical materials

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